In the Claims:

1. (Currently Amended) Process for producing a fuel cell stack with the following steps:

a) stacking the fuel cells into an assembled fuel cell stack (1), and

b) joining the fuel cell stack (1) as the assembled fuel cell stack (1) is heated and compressed,

~~characterized in that~~ wherein compression of the assembled fuel cell stack is performed by application of at least one controlled force component (F) to the assembled fuel cell stack (1),

wherein the application of the at least one controlled force component (F) is performed based upon a change of the dimensions of the assembled fuel cell stack (1) detected with at least one distance sensor, and

wherein an increasing of the compression of the fuel cell stack is stopped as soon as the detected change of dimensions of the fuel cell stack has assumed a value which indicates that the fuel cell stack has attained predetermined properties.

2. (Cancelled).

3. (Cancelled).

4. (Previously Presented) Process as claimed in claim 1, wherein at least one controlled force component is produced by at least one of a compression and a tension means (8.1) and is transmitted to the assembled fuel cell stack (1).

5. (Previously Presented) Process as claimed in claim 4, wherein at least one of a compression and a tension means is connected to at least one tie rod (8.1) that extends through a recess (1.5) provided in the assembled fuel cell stack (1) and which transmits the at least one controlled force component to the assembled fuel cell stack.

6. (Currently Amended) Process as claimed in claim 1, comprising the [[the]] further step of checking the already at least partially joined fuel cell stack (1) for gas-tightness at least one of during and after said joining step.

7. (Previously Presented) Process as claimed in claim 6, wherein said checking step comprises flooding the fuel cell stack (1) with a gas, and detecting possible leaks of the fuel cell stack (1) by way of a drop in gas pressure.

8. (Previously Presented) Process as claimed in claim 7, wherein, in the case of detected leakage of the fuel cell stack (1), the fuel cell stack (1) is at least one of further heated and further compressed.

9. (Previously Presented) Process as claimed in claim 1, comprising the further step, which is carried out at least one of during and after said joining step, of chemical forming of the fuel cells (1.3) of the fuel cell stack (1) by adding a reducing gas, to the fuel cells (1.3) of the fuel cell stack (1).

10. (Previously Presented) Process as claimed in claim 9, wherein a change in the volume of the fuel cell stack (1) caused by said chemical forming step is at least partially balanced by corresponding compression of the fuel cell stack (1).

11. (Previously Presented) Process as claimed in claim 9, wherein following the chemical forming step testing of the electrical serviceability of the fuel cell stack (1) is performed.

12. (Previously Presented) Process as claimed in claim 11, wherein the testing step comprises supplying an anode side of the fuel cell stack with a combustible gas and a cathode side of the fuel cell stack with a cathode gas, and measuring at least one of a voltage which forms in the fuel cell stack and a current which can be taken from the fuel cell stack.

13. (Previously Presented) Process as claimed in claim 5, comprising the further step of connecting the at least one tie rod (1.4) to at least one locking element (1.6) which at least

roughly maintains the bracing of the fuel cell stack (1) even when at least one tie rod (1.4) is loosened from the at least one of a compression and a tension means.

14. (Previously Presented) Process as claimed in claim 9, wherein at least the joining and chemical forming steps are carried out in a gastight process chamber.

15. (Currently Amended; Withdrawn) Device for producing a fuel cell stack (1), comprising a heating means (3) for heating an assembled fuel cell stack (1) and a means (8) for compressing the assembled fuel cell stack (1), wherein the means (8) for compression of the assembled fuel cell stack (1) comprises at least one of a compression and a tension means for applying at least one controlled force component (F) to the assembled fuel cell stack (1);

wherein a control means is provided for controlling the application of the at least one force component by the at least one of the compression and tension means dependent on a change of dimension of the assembled fuel cell stack which is detected with at least one distance sensor; and

wherein the control means controls an increasing of the compression of the fuel cell stack and stops as soon as the change of dimensions of the fuel cell stack detected by the at least one distance sensor has assumed a value which indicates that the fuel cell stack has attained predetermined properties.

16. (Cancelled).

17. (Cancelled).

18. (Withdrawn) Device as claimed in claim 15, wherein a gastight process chamber is provided for holding the assembled fuel cell stack (1) and a gas supply means is provided for flooding at least one of the process chamber and the fuel cell stack in the process chamber with gas.

19. (Withdrawn) Device as claimed in claim 18, further comprising a gas exhaust means (10).

20. (Withdrawn) Device as claimed in claim 15, further comprising an electrical test means (6).

21. (Withdrawn) Device as claimed in claim 15, wherein a plurality of movable gastight process chambers (11) provided for holding a respective assembled fuel cell stack which are moved to different treatment stations for executing individual fuel cell stack production steps.

22. (Withdrawn) Device as claimed in claim 21, wherein the plurality of gastight process chambers (11) are arranged in the form of a carousel.

23. (New, Withdrawn) Device as claimed in claim 15, wherein the predetermined properties in response to which increasing of the at least one force component is stopped comprises at least one of a predetermined tightness and a predetermined close contact of the cells of the fuel cell stack being determined to have been achieved.

24. (New) Device as claimed in claim 15, wherein the control means controls the force based upon forces detected by at least one force sensor, wherein the control means is adapted to produce a force-path curve from the outputs of said at least one force sensor and said at least one distance sensor and to compare the force-path curve produced with a predefined force-path curve, and wherein, when the comparison of said force-path curves indicates nonuniform bracing of the fuel cell stack has occurred, the control means is adapted to initiate countermeasures to make the bracing of the fuel cell stack uniform.

25. (New) Method according to claim 1, wherein increasing of the at least one force component is stopped when at least one of a predetermined tightness or close contact of the cells of the fuel cell stack is determined to have been achieved.

26. (New) Method according to claim 1, wherein the controlled force is controlled based upon forces detected by at least one force sensor, wherein in a force-path curve is produced from the outputs of said at least one force sensor and said at least one distance sensor, wherein the force-path curve produced is compared with a predefined force-path curve, and wherein the comparison of said force-path curves indicates nonuniform bracing of the fuel cell stack has occurred, countermeasures are initiated to make the bracing of the fuel cell stack uniform.